

that the Examiner is actually referring to the formula appearing on page 6, line 15 because none of the formulas appearing on page 5 utilize the symbol "k").

Applicants have carefully considered the Examiner's rejection and respectfully assert that the claims comply with the written description requirement. The originally filed claims and the specification both show the formula at issue. Furthermore, there is a strong presumption that an adequate written description of the claimed invention is present when the application is filed. *In re Wertheim*, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976) ("we are of the opinion that the PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims"). See M.P.E.P. § 2163.

Applicants also question the Examiner's statement that the formula is missing a radical. Indicating a hydrogen with just a line is not uncommon in the chemical art.

Applicants respectfully submit that the Examiner has failed to establish why a person skilled in the art at the time the application was filed would not have recognized that the inventors were in possession of the claimed invention in view of the filed application.

Applicants respectfully submit that the claims meet the written description requirement of the first paragraph of 35 U.S.C. § 112 and that the rejection should be withdrawn.

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The Examiner has also stated that the claims are not commensurate in scope with an enabling disclosure. It appears that the Examiner is asserting that the claims fail to meet the enablement requirement of the first paragraph of 35 U.S.C. § 112. However, the Examiner has not set forth an enablement rejection of the claims.

To facilitate prosecution of the application, Applicants will comment on the potential enablement issue. Applicants believe that the Examiner is referring to the following language appearing in claim 1, 5, 61, and 4: "X and Y independently represent an unsubstituted or substituted aliphatic, cycloaliphatic, or aromatic residue with 1-100 carbon atoms...". This language may be broad, but it has specific limitations and would not require undue experimentation in the chemical art. A person skilled in the art would be able to determine how to make and use the described invention without an exhaustive explanation. Due to the foregoing, Applicants submit that the claims should not be rejected in the future based upon a lack of enablement.

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Claims 10 and 15 are rejected under the second paragraph of 35 U.S.C. § 112.

Regarding claim 10, the Examiner asserts that the term "ormocer" is a trademark. Applicants respectfully dispute that the term "ormocer" is a trademark in the United States and request that the Examiner provide evidence to the contrary. Applicants note that the United States Patent and Trademark Office has issued a final rejection of a trademark application for the term "ormocer" (Application Serial No. 76/340,306). Applicants further note that the term "ormocer" is a commonly used "technicus terminus" for a whole class of compounds composed of organic-inorganic hybrid particles.

Applicants submit that the meaning of "ormocer" is well-known and satisfactorily defined in scientific literature. This is evident from a review of the United States Patent and Trademark Office database and also from a review of databases relating to scientific literature. As such, the rejection of claim 10 should be withdrawn.

Regarding the rejection of claim 15, the Examiner asserts that "usual additives" is indefinite in light of the use of "consisting of" in the preamble of the claim.

In reviewing a claim for compliance with 35 U.S.C. § 112, second paragraph, the Examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. § 112, second paragraph by providing clear warning to others as to what constitutes infringement of the patent. See *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). If the language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement, a rejection of the claim under 35 U.S.C. § 112, second paragraph would be appropriate. See *Morton Int'l, Inc. v. Cardinal Chemical Co.*, 5 F.3d 1464, 1470, 28 USPQ2d 1190, 1195 (Fed. Cir. 1993).

The test for definiteness under 35 U.S.C. § 112, second paragraph is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Applicants respectfully submit that one skilled in the art would be able to ascertain the meaning of "usual additives" in light of the specification. The claim is merely setting forth that the dental material can consist of 0-20% wt of "usual" or "known" additives. This language is not indefinite, although the Examiner may prefer the use of "additives" without the term "usual". The Examiner should not reject claim 15 merely because there is a desire to improve the clarity or precision of the language. Applicants respectfully submit that the requirements of 35 U.S.C. § 112, second paragraph have been satisfied.

Claim Rejections – 35 U.S.C. §§ 102 and 103

Claims 1-7 and 9-16 are rejected as anticipated under 102(b) or obvious under 103(a) in light of Yang (US 5,969,000), Erdlich (US 5,708,051), Schmitz-Josten (US 4,177,563), Lai (US 5,081,164), or Ibsen (US 4,859,716).

Applicants respectfully submit that the rejections based on Yang should be withdrawn. In issuing the rejection, the Examiner made particular reference to formula (I) of claim 1 and asserted that the formula encompasses the ethoxylated bisphenol A dimethacrylate and polycarbonate dimethacrylate condensation product of Yang. Applicants note, however, that formula (I) does not include methacrylic or acrylic resins. Therefore, Applicants submit that the claimed compounds and the compounds referenced in Yang are different.

Applicants respectfully submit that the rejections based on Erdlich should be withdrawn. Applicants respectfully assert that the claimed invention is not anticipated or obvious in light of Erdlich, which discloses dental materials based on poly(meth)acrylates. The present application claims detail dental materials based on monomers of formula (I), which does not include poly(meth)acrylates.

Applicants respectfully submit that the rejections based on Schmitz-Josten should be withdrawn. Applicants respectfully assert that the claimed invention is not anticipated or obvious in light of Schmitz-Josten, which discloses dental materials comprising polymerizing plastic materials. The specification of Schmitz-Josten (col. 4, lines 22 to col. 9) and the examples exhibit that the polymerizing plastic materials are based on acrylate resins. The rejected claims detail that the dental materials are based on monomers of formula (I), which do not include acrylates. Moreover, the invention of Schmitz-Josten et al. refers to dental filling materials

based on chemically hardening 2 paste systems, whereas the present application refers to light curing material.

Applicants respectfully submit that the rejections based on Lai and Ibsen should be withdrawn. These patents detail dental materials based on methacrylic monomers. The present application claims dental materials comprised of monomers according to formula (I), which does not include methacrylates.

Applicants respectfully submit that the Examiner has failed to establish that each and every feature of claims 1-7 and 9-16 are detailed in Yang, Erdlich, Schmit-Josten, Lai, or Ibsen. Furthermore, the Examiner has failed to establish a *prima facie* case of obviousness based upon the cited prior art patents when issuing rejections of these claims.

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Claims 1-10 and 12-16 are rejected as anticipated or obvious in view of Palazzotto (US 4,889,792) and Oxman (US 5,980,253).

The specifications of Palazzotto given in col. 2, line 14 to col. 3, line 11 show that the invention of Palazzotto refers to photoinitiator systems to polymerize compositions based on acrylates, methacrylates, styrene and vinyl ester monomers. The compositions of Palazzotto fail to describe compositions based on vinyl ethers (cf. in experiments of the present invention).

Applicants respectfully submit that the claimed invention is not anticipated or obvious in view of Palazzotto.

The experiments of Oxman show the use of methacrylate and epoxide resins, which are different than formula (I). Therefore, the invention is not anticipated or obvious by Oxman.

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The Examiner states that the claims 1-16 are rejected as anticipated or obvious in view of Trom et al. (US 6,444,725).

The examples of Trom et al. and the specification in col. 6, line 41 to col. 7, line 17 show that the initiator system in the examples of Trom et al. is used to initiate a free radical polymerization of methacrylates with light to harden the dental composition.

The independent claims of the present application recite dental materials comprising monomers of formula (I), which are not methacrylates. Therefore, the invention is not anticipated or obvious in view of Trom.

* * *

Claims 1-7, 9, 10 and 12-16 are rejected as anticipated or obvious by Rheinberger et al. (US 6,180,688). The examples of Rheinberger teach compositions based on methacrylate resins which are different than formula (I). Therefore, the claims are not anticipated or obvious in view of Rheinberger.

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Claims 1-16 are rejected as obvious based upon Yang (US 5,969,000), Erdlich (US 5,708,051), Schmit-Josten (US 4,177,563), Lai (US 5,081,164), or Ibsen (US 4,859,716) in view of Palazzotto (US 4,889,792) or Oxman (US 5,980,253).

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness based upon the aforementioned references. As discussed above, the primary references each have specific deficiencies that would not be alleviated upon consideration of the secondary references Palazzotto or Oxman.

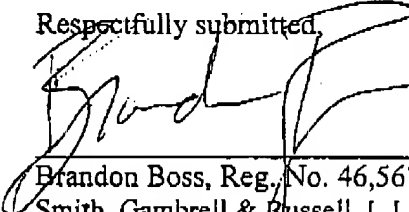
CONCLUSION

Applicants respectfully request allowance of the application. If any additional fees are due in connection with the filing of this response, such as fees under 37 C.F.R. §§ 1.16 or 1.17, please charge the fees to Deposit Account No. 02-4300. Any overpayment can be credited to Deposit Account No. 02-4300.

Respectfully submitted,

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Signature:


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* Practice is limited to matters and proceeding before federal courts and agencies.